

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

# PCT

## INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

To:  
OKABE, Masao  
No. 602, Fuji Bldg.  
2-3, Marunouchi 3-chome  
Chiyoda-ku  
Tokyo 1000005  
JAPAN



## REGISTERED MAIL

Applicant's or agent's file reference  
1002556W001

International application No.  
PCT/JP2005/001316

Applicant

CANON KABUSHIKI KAISHA

Date of mailing  
(day/month/year)

12/10/2005

**PAYMENT DUE**

within **ONE MONTH** from  
the above date of mailing

International filing date  
(day/month/year)

25/01/2005

1. This International Searching Authority

- (i) considers that there are 32 (number of) inventions claimed in the international application covered by the claims indicated ~~below~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~below~~ on the extra sheet:

- (ii) ☒ has carried out a partial international search (see Annex) ☐ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:

Invention 1: claims 1-14 (part)

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby **Invited**, within the time limit indicated above, to pay the amount indicated below:

EUR 1.550,00	x	31	=	EUR 48.050
Fee per additional invention		number of additional inventions		total amount of additional fees

Or, \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☐ Claim(s) Nos. \_\_\_\_\_ have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Anu Evers

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:
- see 'Invitation to pay additional fees'**
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	EP 1 253 160 A (CANON KABUSHIKI KAISHA) 30 October 2002 (2002-10-30) the whole document	1-3, 6-9  4, 5, 10-14
X A	COLETTI-PREVIERO M-A ET AL: "ALUMINA PHOSPHATE COMPLEXES FOR IMMOBILIZATION OF BIOMOLECULES" ANALYTICAL BIOCHEMISTRY, vol. 180, no. 1, 1989, pages 1-10, XP009050194 ISSN: 0003-2697 the whole document	1-3, 6-9    4, 5, 10-14
X	FURTADO S ET AL: "BIOCATALYST-ADSORBANT SYSTEMS: A VIABLE ALTERNATIVE TO PROTEOLYTIC PROCESSES IN SOLUTION" PREPARATIVE BIOCHEMISTRY AND BIOTECHNOLOGY, DEKKER, NEW YORK, NY, US, vol. 32, no. 3, August 2002 (2002-08), pages 217-237, XP009050198 ISSN: 1082-6068 the whole document	1-3, 6-9
E	WO 2005/016971 A (CANON KABUSHIKI KAISHA; SHIOTSUKA, HIDENORI; IMAMURA, TAKESHI; NOMOTO,) 24 February 2005 (2005-02-24) the whole document	1-3, 6-9

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-14(part)

Kit for immobilizing an organic substance on a substrate, comprising a substrate, at least part of which contains aluminium oxide, and a binding domain coupled with the organic substance, where the binding domain contains at least a peptide composed of SEQ ID No 1, structure comprising the above substrate with the organic substance immobilized thereto, methods to prepared said structures, SEQ ID No 1, DNA sequence encoding the same, expression vector expressing SEQ ID No1 and organic substance, and an organic substance fused to SEQ ID No 1.

---

Invention 2-32: claims 1-14(part)

Kit for immobilizing an organic substance on a substrate, comprising a substrate, at least part of which contains aluminium oxide, and a binding domain coupled with the organic substance, where the binding domain contains at least a peptide composed of one of SEQ ID No 2-32, structure comprising the above substrate with the organic substance immobilized thereto, methods to prepared said structures, SEQ ID No 2-32, DNA sequence encoding the same, expression vector expressing SEQ ID No 2-32 and organic substance, and an organic substance fused to SEQ ID No 2-32.

---

The inventions listed as groups 1-32 do not relate to a single general inventive concept as required by Rule 13.1 PCT since they lack the same or corresponding special technical features within the meaning of Rule 13.2 PCT for the following reasons:

The present problem to be solved concerns the immobilization of organic substances on a surface, part of which contains aluminium oxide, where the orientation of the organic substance is regulated so as to exert its desired functions. The Applicant solves the problem by providing a binding domain containing at least a peptide composed of one or more amino acids coupled to the organic substance, where the peptide has specific affinity to aluminum oxide.

D1 discloses alumina particles coated with PHA synthetase, and a method for screening for amino acid sequences having a binding ability to a base material, where these amino acid sequences are bound to PHA synthetase. Documents D2 and D3 disclose proteins immobilized onto aluminium oxide either by direct adsorption or via the specific binding of a phosphoamino acid. In all cases the proteins are able to exert their desired functions (activity is maintained).

In view of documents D1-D3 the single general inventive concept which would define the contribution of the present invention over the prior art is known.

The problem to be solved by each of the inventions is to find a binding domain that has affinity for aluminium oxide for the immobilization of

organic substances. The Applicant solves the above problem by providing the sequences ID No 1-32. These sequences are different from each other, i.e., there isn't a significant structural unit shared by all the alternative sequences and which would be responsible for the alleged effect (the specific binding to aluminium oxide).

Accordingly, the claims are not so linked by a special technical feature within the meaning of Rule 13.2 PCT so as to form a single general inventive concept. The thirty two different groups of inventions concern different solutions by providing thirty two different technically unrelated amino acid sequences, so that each invention is characterised by its own separate concept.

# Patent Family Annex

Information on patent family members

International Application No

PCT/JP2005/001316

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 1253160	A	30-10-2002	JP	2003011312 A	15-01-2003
			EP	1253160 A2	30-10-2002
			US	2003104302 A1	05-06-2003
			US	2004259026 A1	23-12-2004
WQ 2005016971	A	24-02-2005	JP	2005095154 A	14-04-2005
			WQ	2005016971 A1	24-02-2005

## Important information

Rule 40 PCT has been amended as of 1 April 2005. For general information on the protest procedure under the PCT please refer to OJ EPO 3/2005, pages 226/227.

1. As in the past the payment of any additional fee may be made under protest i.e. accompanied by a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fees is excessive according to amended Rule 40.2(c) PCT.
2. Although no longer obligatory, prior to examination of the protest by the Board of Appeal the EPO will subject the invitation to pay additional fees to an internal review which is free of charge. The result of this review will be communicated to the applicant.
3. The fee for examination of the protest (Rule 40.2(e) PCT) is payable within one month of the date of the invitation to pay additional fees (Rule 40.1(iii) PCT), however, in order to allow the applicant to consider the result of the internal review, the applicant may pay the protest fee within one month from the date of notification of the result of the review.
4. Should the applicant wish to maintain his protest in light of the review he must pay the protest fee within one month from the date of notification of the result of the internal review, in which case the protest will be referred to the Board of Appeal. Should the Board of Appeal find that the protest was entirely justified, the protest fee shall be refunded.
5. In the event of the applicant already having paid the protest fee before notification of the result of the review, the protest will be referred to the Board of Appeal **unless** the result of the internal review was that the protest was **entirely** justified **or** the applicant indicates within one month from the date of notification of the result of the review that he does not wish to continue the protest, in both cases the protest fee will be refunded.

## Important Information

### General

- the **claims cannot be changed** at this point in the procedure, the transmitted report is **not** the ISR (see Art. 19 PCT)
- non-payment does not lead to a **loss of rights**, a new procedure will be started on entry into the regional or national phase
- any payments have to be effected **directly** to this ISA (account details on separate sheets), payments to other entities will not be accepted
- in case of a **total of more than 2 inventions** found: when paying please **specify exactly** which claims should be searched
- an **extension of the set time limit** cannot be granted

### Payment by cheque:

- the **date of payment** is considered to be the **date the original cheque is received at the EPO**, under the condition that the cheque is **covered**
- faxed cheques are not considered to be a valid payment
- only payments in EUR are accepted, no equivalents in other currencies

### Payment by money transfer:

- the **date of payment** is considered to be the **date the money is booked** in the EPO bank account
- only payments in EUR are accepted, no equivalents in other currencies

### Payment by deposit account:

- the **date of payment** is considered to be the date that the **authorisation** to deduct fees from the deposit account is **received at the EPO**

***note:** if you don't have a deposit account with the EPO yourself you might want to consider using the account of an associate as a safe and quick way of paying*

### Payment by credit card:

- payments by **credit card** are **not possible**

### Payments under protest according to Rule 40 PCT:

- the protest will **not be accepted without a payment** of additional search fee(s)
- the protest has to be **accompanied by a technical reasoning**

### Account Details

Accounts of the European Patent Organisation

N° 3 338 800 00 (BLZ 700 800 00)  
Dresdner Bank  
Promenadeplatz 7  
D-80273 München  
SWIFT Code: DRESDEFF700

N° 300-800 (BLZ 700 100 80)  
Postbank AG  
Bayerstr. 49  
D-80138 München